

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A computer implemented method of automatically generating Electronic Data Interchange (EDI) documents or messages using an EDI system, comprising:

storing a plurality of maps for respectively mapping metadata from different types of source documents to variables of a virtual document;

receiving a source data model having a first EDI format corresponding to EDI related data, the source data model including metadata;

determining a type of the source data model from the metadata;

obtaining a first map from the plurality of maps based on the determined type of the source data model, and mapping the metadata of the source data model to corresponding variables of a virtual document in accordance with the first map;

determining a type of a target data model to which data from the source data model is to be transferred to;

obtaining a second map from the plurality of maps based on the determined type of the target data model, and mapping the variables of the virtual document to metadata of a target data model having a second EDI format in accordance with the second map.

2. (Original) The method according to claim 1, wherein, when a source message or document is inputted to the EDI system, the source message or document is translated to obtain its corresponding metadata, and the values corresponding to the metadata are provided to the corresponding mapped variables of the virtual document at run time, and

wherein the corresponding values of the mapped variables of the virtual document are provided to the corresponding metadata of the target data model, so as to populate the target data model with data from the source data model.

3. (Original) The method according to claim 2, wherein the first EDI format is a data transaction formatting standard, and the second EDI format is a data transaction formatting standard.

4. (Currently Amended) The method according to claim 2, wherein the variables of the virtual document are assigned semantic names representative of a type of data to be stored to the variables, and wherein the maps are created by a user prior to receiving the source data model, based on an intuitive correspondence made by the user from a particular metadata name of one of the metadata of the source data model and a particular semantic name of one of the variables of the virtual document.

5. (Currently Amended) A system for automatically generating data in a self-describing markup language format from ~~received~~ EDI data, comprising:

a storing unit that stores a plurality of maps for respectively mapping metadata from different types of source documents to variables of a virtual document;

a receiving unit that receives a message or document from a first trading partner as EDI data;

a determining unit that determines a type of the message or document received from the metadata and that determines a type of a target data model;

a virtual document that obtains a first map from the plurality of maps stored in the storing unit based on the type of the message or document as determined by the determining unit, and that maps metadata from the message or document of the first trading partner to variables of the virtual document in accordance with the first map, and that obtains a second map from the plurality of maps stored in the storing unit based on the type of the target data model as determined by the determining unit, and that maps metadata from a message or document of a second trading partner to the variables of the virtual document in accordance with the second map; and

a transmitting unit that transmits values provided to the variables of the virtual document from the message or document from the first trading partner, to the corresponding metadata of the message or document of the second trading partner.

6. (Original) The system according to claim 5, wherein self-describing markup language format is XML.

7. (Currently Amended) The system according to claim 5, wherein the variables of the virtual document are assigned semantic names representative of a type of data to be stored to the variables, and wherein the maps are created by a user prior to receiving the message or document from the first trading partner, based on an intuitive correspondence made by the user from a particular metadata name of one of the metadata of the message or document received from the first trading partner and a particular semantic name of one of the variables of the virtual document.

8. (Currently Amended) A computer readable data storage medium for an EDI system having program code recorded thereon that is executable by a computer to perform the following steps :

storing a plurality of maps for respectively mapping metadata from different types of source documents to variables of a virtual document;  
receiving a source data model having a first EDI format corresponding to EDI related data, the source data model including metadata;  
determining a type of the source data model from the metadata;  
obtaining a first map from the plurality of maps based on the determined type of the source data model, and mapping the metadata of the source data model to corresponding variables of a virtual document in accordance with the first map;  
determining a type of a target data model to which data from the source data model is to be transferred to;

obtaining a second map from the plurality of maps based on the determined type of the target data model, and mapping the variables of the virtual document to metadata of a target data model in accordance with the second map,

wherein, when a source message or document is received by the EDI system, the program code is programmed to:

translate the source message or document to obtain its corresponding metadata;

provide the values corresponding to the metadata to the corresponding mapped variables of the virtual document; and

provide the corresponding values of the mapped variables of the virtual document to the corresponding metadata of the target data model.

9. (Original) The computer readable data storage medium according to claim 8, wherein the EDI-related data is in a self-describing markup language format.

10. (Original) The computer readable data storage medium according to claim 9, wherein the self-describing markup language format is XML.

11. (Currently Amended) The computer readable data storage medium according to claim 8, wherein the variables of the virtual document are assigned semantic names representative of a type of data to be stored to the variables, and

wherein the maps are created by a user prior to receiving the source data model, based on an intuitive correspondence made by the user from a particular metadata name of one of the metadata of the source data model and a particular semantic name of one of the variables of the virtual document.

12. (Currently Amended) A system for automatically generating data in a self-describing markup language format from received EDI data, comprising:

storing means for storing a plurality of maps for respectively mapping metadata from different types of source documents to variables of a virtual document;

receiving means for receiving a message or document from a first trading partner as EDI data;

determining means for determining a type of the message or document received by the receiving means from the metadata, and for determining a type of a target data model;

a virtual document that obtains a first map from the plurality of maps stored in the storing means based on the type of the message or document received by the receiving means as determined by the determining means, and that maps metadata from the message or document of the first trading partner to variables of the virtual document in accordance with the first map, and that obtains a second map from the plurality of maps stored in the storing means based on the type of the target data model as determined by the determining means, and that maps metadata from a message or document of a second trading partner to the variables of the virtual document in accordance with the second map; and

transmitting means for transmitting values provided to the variables of the virtual document from the message or document from the first trading partner, to the corresponding metadata of the message or document of the second trading partner.

13. (Original) The system according to claim 12, wherein self-describing markup language format is XML.

14. (Currently Amended) The system according to claim 12, wherein the variables of the virtual document are assigned semantic names representative of a type of data to be stored to the variables, and

wherein the maps are created by a user prior to receiving the source data model, based on an intuitive correspondence made by the user from a particular metadata name of one of the metadata of the message or document received by

the receiving means and a particular semantic name of one of the variables of the virtual document.

15. (Currently Amended) A method for automatically generating data in a prescribed format from a received EDI document or message having metadata elements, comprising:

assigning, by a first user, a first plurality of maps from metadata elements of different types of source documents to variables of a virtual document;

assigning, by a second user, a second plurality of maps from the variables of the virtual document to metadata elements of a target EDI document or message;

pulling values assigned to the metadata elements of the received EDI document or message to the variables of the virtual document, based on a source document-to-virtual document mapping that corresponds to one of the first plurality of maps that is automatically determined based on a type of the metadata elements of the received EDI document or message; and

pushing values assigned to the variables of the virtual document to metadata elements of the target EDI document or message, based on a target document-to-virtual document mapping that corresponds to one of the second plurality of maps that is automatically determined based on a type of the metadata elements of the target EDI document or message.

16. (New) The method according to claim 1, further comprising:

obtaining, from a database, source-independent data that is used to provide predetermined values for at least one of the metadata of the target data model.

17. (New) The system according to claim 5, further comprising:

a database that is communicatively connected to the virtual document, the database storing source-independent data that is used by the virtual document to provide predetermined values for at least one of the metadata of the target data model.

18. (New) The computer readable data storage medium according to claim 8, wherein the program code is further programmed to:

obtain, from a database, source-independent data that is used to provide predetermined values for at least one of the metadata of the target data model.

19. (New) The system according to claim 12, further comprising:  
a database that is communicatively connected to the virtual document,  
the database storing source-independent data that is used by the virtual  
document to provide predetermined values for at least one of the metadata of  
the target data model.

20. (New) The method according to claim 15, wherein at least  
one of the values pulled to the variables of the virtual document is obtained from  
source-independent information obtained from a database.